UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/447,472	11/23/1999	JAMES B. ARMSTRONG	007412.00289	3863

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BANNER & WITCOFF , LTD
ATTORNEYS FOR CLIENT NUMBER 007412
1100 13th STREET, N.W.
SUITE 1200
WASHINGTON, DC 20005-4051

EXAMINER
CHOWDHURY, SUMAIYA A

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	09/447,472	ARMSTRONG ET AL.
	Examiner	Art Unit	
	SUMAIYA A. CHOWDHURY	2421	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *16 May 2011*.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-4,6-8,19,21-25 and 27-34* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-4, 6-8, 19, 21-25, 27-34* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-4, 6-8, 19, 21-25, and 27-34 have

been considered but are moot in view of the new ground(s) of rejection.

(a) Applicant argues that the prior art does not teach the newly amended feature.

The Examiner has brought in Goldszmidt (6195680) to teach the newly amended

feature.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-4, 6-8, 19, 21-25, and 27-34 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Hokanson (6094680) in view of Goldszmidt (5999351).

    As for claim 1, Hokanson teaches:

    A server configured to distribute requested video assets to requesting user

equipment via the access network (col. 3, lines 1-5), the server comprising;

    a manager for managing migration of video assets, wherein the manager tracks

asset request rates and threshold rates of respective video assets (col. 2, lines 42-48,

col. 6, lines 35-45);

wherein the manager (70, 72), in response to an infrequently requested video asset becoming frequently requested, is configured to select and transmit the frequently requested video asset to at least one primary partitions of at least one server (Hokanson teaches the hierarchical use of various mediums for storage of the video assets where each of the video assets are prioritized within a storage hierarchy. This hierarchical structure of different memories can be treated as the equivalent of Applicant's partitioning of the storage between primary and secondary partitions; col. 2, lines 55-60, col. 3, lines 23-30, col. 9, lines 43-47, lines 55-67);

wherein the manager, in response to a frequently requested video asset becoming infrequently requested, is configured to select and transmit the infrequently requested video asset to at least one secondary partition of at least one server, and removing the infrequently requested video assets from the primary partitions (col. 6, lines 35-45, col. 9, lines 43-47, lines 55-67);

However, Hokanson fails to disclose:

Infrequently requested content is stored in at least two servers;

Frequently requested content is stored in at least one but less than all of the servers;

In an analogous art, Goldszmidt discloses:

Infrequently requested content is stored in at least two servers (col. 4, lines 26-54, col. 5, lines 33-45, col. 7, lines 10-22, col. 8, lines 27-33);

Frequently requested content is stored in at least one but less than all of the servers (Goldszmidt discloses load balancing in order to provide a god balance of

server availability. The control server redirects user requests to servers that can provide

the multimedia requested. In the event that there is a server failure or content overload,

the control server redirects the client to the secondary server which also provides the

same multimedia. Hence, Goldszmidt discloses that the same content is stored in at

least two servers, and that the same content is stored in at least one but less than all of

the plurality of servers. col. 4, lines 26-54, col. 5, lines 33-45, col. 7, lines 10-22, col. 8,

lines 27-33);

As for claim 2, the modified Hokanson discloses the manager is configured to

identify an infrequently requested video asset as becoming frequently requested when

the asset request rate crosses above the threshold rate; the manager is configured to

identify a frequently requested video asset as becoming infrequently requested when

the asset request rate crosses below the threshold rate (A threshold is inherent in the

distinction between content requested by a "large number of subscribers" and content

that is "rarely" requested; see Hokanson: col. 2, lines 55-60, col. 3, lines 23-30, col. 9,

lines 43-47, lines 55-67, col. 6, lines 35-45).

As for claim 3, the modified Hokanson teaches in response to receiving a request

for a video asset, the manager is configured to control distribution of the requested

video asset from one of the server identified as storing the requested video asset to the

requesting user equipment (see Hokanson: col. 3, lines 1-11, col. 7, lines 35-42).

As for claims 4 and 22, the modified Hokanson discloses:

a content manager for receiving the request for the video asset and determining

whether the requested video asset is stored locally in the storage of that head-

end at which the video asset request is received or stored remotely in the storage

of a different head-end (see Hokanson: col. 7, lines 25-42);

a stream session manager, for directing the associated server to distribute

streams of video assets to subscriber equipment requesting said the video

assets (see Hokanson: col. 7, lines 25-42);

a content session manager for responding to video asset requests forwarded

from managers of other server (see Hokanson: col. 7, lines 25-42).

As for claims 6 and 27, the modified Hokanson discloses wherein a content

manager of the local server at which a video asset request is received, in response to

determining that a requested video asset is stored locally, is configured to notify the

stream session manager to deliver the requested video asset by the local server to the

requesting subscriber equipment via the access network (see Hokanson: col. 7, lines

57-67).

As for claim 7, the modified Hokanson teaches wherein the content manager of a

local head-end at which a video asset request is received, in response to determining

that a requested video asset is stored remotely in the storage of a remote head-end,

instructs the stream session manager of the local head-end to contact the content

session manager of the remote head-end (see Hokanson: col. 7, lines 25-42).

As for claim 8, the modified Hokanson teaches wherein the content session

manager of the remote head-end identifies the requested video asset in the storage of

the remote head-end, allocates bandwidth for transmitting the requested video asset,

and, in response to a determination that the requested video asset is to be provided

from the remote head-end to the requesting subscriber equipment via the local head-

end, notifies the server of the remote head-end to transmit the requested video asset to

the local head-end using the inter-server network (see Hokanson: col. 7, lines 25-42).

Claim 19 contains the limitations of claim 1 which is rejected under Hokanson in

view of Goldszmidt. Claim 19 additionally calls for the following:

Receiving at a server an indication whether asset request rates for a plurality of

video assets stored in a plurality of servers exceeds respective threshold rates for the

plurality of the video assets (see Hokanson: col. 2, lines 42-48, col. 6, lines 32-45);

In response to an infrequently requested video asset becoming frequently

requested, selecting and transmitting the frequently requested video asset to at least

one primary partition of each of the plurality of servers, wherein each server serves as a

locals server to a respective group of user equipment devices via an access network

and a remote server to at least one other group of user equipment devices (Hokanson

teaches locally storing (caching) movie information once it becomes highly requested.

This occurs when a new release of a movie occurs. When a movie is newly released, it

is stored locally at all servers since a high number of users request the movie

information all across the country. It is unlikely that only certain locations would only

request a highly anticipated newly released movie. As a result, the movie information is

locally cached at all servers. Any of these servers is remotely accessible by another

group of users. col. 2, lines 55-60, col. 3, lines 23-30, col. 9, lines 43-47, lines 55-67);

Claim 21 contains the limitations of claim 1 which is rejected under Hokanson in

view of Goldszmidt.

As for claim 23, the modified Hokanson discloses wherein the identified head-

end is the local head-end coupled directly to the requesting subscriber equipment, the

local head-end provides the requested video asset to the requesting subscriber

equipment via the access network (see Hokanson: col. 7, lines 58-67)

As for claims 24, the modified Hokanson discloses wherein, the identified head-

end is one of the remote head-ends, the local head-end requests the requested video

asset from the remote head-end and the remote head-end provides the requested video

asset to the local head-end via an inter-server network (see Hokanson: col. 7, lines 25-

42).

Claim 25 contains the limitations of claims 1 and 4 which is rejected under

Hokanson in view of Goldszmidt.

As for claim 28, the modified Hokanson discloses wherein, the identified head-

end is one of the remote head-ends, the local head-end requests the requested video

asset from the remote head-end and the remote head-end provides the requested video

asset to the local head-end via an inter-server network (see Hokanson: col. 7, lines 25-

42).

As for claim 29, the modified Hokanson discloses wherein the content session

manager of the remote head-end identifies the requested video asset in the storage of

the remote head-end and allocates bandwidth for transmitting the requested video asset

(see Hokanson: col. 8, lines 1-17).

As for claim 30, the modified Hokanson teaches in response to a determination

that the requested video asset is to be provided from the remote head-end to the

requesting subscriber equipment via the local head-end, the content session manager

of the remote head-end notifies the server of the remote head-end to transmit the

requested video asset to the local head-end (see Hokanson: col. 8, lines 1-17).

As for claim 31, the modified Hokanson teaches in response to a determination

that the server of the local head-end is available to receive the requested video asset

from the remote head-end, the server of the remote head-end streams the requested

video asset to the local head-end over the inter-server network (see Hokanson: col. 8,

lines 1-17).

As for claim 32, the modified Hokanson teaches wherein the server of the local

head-end received the requested video asset from the server of the remote head-end,

wherein the received video asset is stored in the storage of the local head-end (see

Hokanson: col. 7, lines 57-67).

As for claim 33, the modified Hokanson teaches in response to a determination

that the requested video asset is to be provided directly from the remote head-end to

the requesting subscriber equipment, the content session manager of the remote head-

end requests the stream session manager of the remote head-end to allocate

bandwidth for providing the requested video asset to the requesting subscriber

equipment (see Hokanson: col. 8, lines 1-17).

As for claim 34, the modified Hokanson teaches wherein the stream session

manager of the remote head-end notifies the server of the remote head-end to stream

the requested video asset to the requesting subscriber equipment (see Hokanson: col.

8, lines 1-17).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SUMAIYA A. CHOWDHURY whose telephone number is (571)272-8567. The examiner can normally be reached on Mon-Fri, 9-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine Kincaid can be reached on (571) 272-4063. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S. A. C./
Examiner, Art Unit 2421

/Hunter B. Lonsberry/
Primary Examiner, Art Unit 2421